

What is claimed is

1. A method for interpolating a video signal having a plurality of present pixels comprising the steps of:
- 5 calculating a right side interpolation component and a left side interpolation component for each of the present pixels;
- adding the right side interpolation component of a present pixel on the left side of an assumption pixel to be interpolated to the left side interpolation component of another present pixel on the right side of the assumption pixel, thereby obtaining a pixel data for the assumption pixel, wherein
- 10 the right side interpolation component and the left side interpolation component are calculated based on a pixel data of a central present pixel and pixel data of present pixels around the central present pixel.
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2. The method according to claim 1 further comprising:
- 20 calculating an adjusting value based on a pixel data of a central present pixel and pixel data of present pixels around the central present pixel,
- setting a polarity of the adjusting value based on pixel data of a pair of present pixels on both sides of the central present pixel,
- 25 calculating the right side interpolation component for the central present pixel based on a $1/2$ value of the pixel data of the central present pixel and the

adjusting value applied with a polarity,

calculating the left side interpolation component
for the central present pixel based on a $1/2$ value of
the pixel data of the central present pixel and the
5 adjusting value applied with the polarity.

3. The method according to claim 1 wherein at
least five sequential present pixels in a direction
selected from a horizontal direction, vertical direction
and oblique direction are used as the central present
10 pixel and present pixels around the central pixel.

4. The method according to claim 1 further
comprising:

identifying pixel data of five sequential present
pixels in a direction selected from a horizontal
15 direction, vertical direction and oblique direction as a
first pixel data, a second pixel data, a third pixel
data, a fourth pixel data and a five pixel data in
order,

obtaining a first value obtained by adding together
20 an absolute value of the difference between the first
and second pixel data and an absolute value of the
difference between the second and third pixel data,

obtaining a second value obtained by adding
together an absolute value of the difference between the
25 second and third pixel data and an absolute value of the
difference between the third and fourth pixel data,

obtaining a third value obtained by adding together
an absolute value of the difference between the third

and fourth pixel data and an absolute value of the
difference between the fourth and fifth pixel data,
selecting a minimum value from the first, second
and third values,

42.
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multiplying the minimum value by a coefficient,

setting a polarity of the minimum value multiplied
by the coefficient by comparing the second pixel data
with the fourth pixel data,

calculating a right side interpolation component by
10 adding together a $1/2$ value of the third pixel data and
the minimum value applied with a polarity and multiplied
by the coefficient,

calculating a left side interpolation component by
subtracting the minimum value applied with a polarity
15 and multiplied by the coefficient from the $1/2$ value of
the third pixel data.